The study shall, at a minimum—

(1) obtain measurements of nitrous oxide, methane, and nonmethane hydrocarbons from

tropical and temperate forests;
(2) determine the manner in which the nitrous oxide, methane, and nonmethane hydrocarbon emissions from temperate and tropical forest systems will respond due to climate change; and

(3) identify and address alternative management strategies for temperate and tropical forests that may mitigate any negative effects of global climate change.

### (c) Reports

The Secretary shall submit reports of the studies conducted under subsections (a) and (b) of this section within 3 and 6 years, respectively, after November 28, 1990, to the Committee on Agriculture and the Committee on Science, Space, and Technology of the House of Representatives, and the Committee on Agriculture, Nutrition, and Forestry of the Senate. In addition, interim reports regarding such studies shall be provided by the Secretary to such Committees annually, with recommendations for actions which may be taken to mitigate the negative effects of global climate change and to adapt to global climate changes and related phenomena.

(Pub. L. 101–624, title XXIV, §2403, Nov. 28, 1990, 104 Stat. 4059.)

### CHANGE OF NAME

Committee on Science, Space, and Technology of House of Representatives treated as referring to Committee on Science of House of Representatives by section 1(a) of Pub. L. 104-14, set out as a note preceding section 21 of Title 2, The Congress.

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in section 6701 of this title.

## § 6703. Repealed. Pub. L. 104–127, title VIII, § 868, Apr. 4, 1996, 110 Stat. 1175

Section, Pub. L. 101-624, title XXIV, §2404, Nov. 28, 1990, 104 Stat. 4060, required Secretary of Agriculture to establish technical advisory committee to provide advice to Secretary concerning major study areas required under this chapter.

## § 6704. Office of International Forestry

## (a) Establishment

The Secretary, acting through the Chief of the Forest Service, shall establish an Office of International Forestry within the Forest Service within six months after November 28, 1990.

# (b) Deputy Chief designation

The Chief shall appoint a Deputy Chief for International Forestry.

## (c) Duties

The Deputy Chief shall—

(1) be responsible for the international forestry activities of the Forest Service;

(2) coordinate the activities of the Forest Service in implementing the provisions of this chapter; and (3) serve as Forest Service liaison to the director for the program established pursuant to section 6701 of this title.

### (d) Authorization of appropriations

There are authorized to be appropriated for each of fiscal years 1996 through 2007 such sums as are necessary to carry out this section.

(Pub. L. 101-624, title XXIV, §2405, Nov. 28, 1990, 104 Stat. 4060; Pub. L. 104-127, title III, §371, Apr. 4, 1996, 110 Stat. 1015; Pub. L. 107-171, title VIII, §8102, May 13, 2002, 116 Stat. 475.)

### AMENDMENTS

2002—Subsec. (d). Pub. L. 107-171 substituted "2007" for "2002".

1996—Subsec. (d). Pub. L. 104–127 added subsec. (d).

### § 6705. Line item

The President's proposed budget to Congress for the first fiscal year beginning after November 28, 1990, and for each subsequent fiscal year shall specifically identify funds to be spent on Forest Service international cooperation and assistance.

(Pub. L. 101-624, title XXIV, §2406, Nov. 28, 1990, 104 Stat. 4060.)

## § 6706. Institutes of Tropical Forestry

The Secretary is authorized and directed to establish an Institute of Tropical Forestry in Puerto Rico and an Institute of Pacific Islands Forestry (hereafter in this section referred to as the "Institutes"). The Institutes shall conduct research on forest management and natural resources that shall include—

- (1) management and development of tropical forests;
- (2) the relationship between climate change and tropical forests;
  - (3) threatened and endangered species;
  - (4) recreation and tourism;
- (5) development of tropical forest resources on a sustained yield basis;
- (6) techniques to monitor the health and productivity of tropical forests;
- (7) tropical forest regeneration and restoration: and
- (8) the effects of tropical deforestation on biodiversity, global climate, wildlife, soils, and water.

(Pub. L. 101-624, title XXIV, §2407, Nov. 28, 1990, 104 Stat. 4060.)

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in title 16 section 4503d.

### § 6707. Urban forestry demonstration projects

The Secretary is authorized to undertake, through the Forest Service's Northeastern Area State and Private Forestry program, a study and pilot implementation project to demonstrate the benefits of retaining and integrating forests in urban development. The focus of such a study and implementation project should be to protect the environment and associated natural resource values, for current and future generations.

(Pub. L. 101-624, title XXIV, §2409, Nov. 28, 1990, 104 Stat. 4061.)

### § 6708. Biomass energy demonstration projects

The Secretary, in consultation with the Secretary of Energy, may carry out projects that demonstrate the potential of short-rotation silvicultural methods to produce wood for electricity production and industrial energy needs. In carrying out such projects, the Secretary shall cooperate with private industries, Federal and State agencies, and other organizations.

(Pub. L. 101-624, title XXIV, §2410, Nov. 28, 1990, 104 Stat. 4061.)

# § 6709. Interagency cooperation to maximize biomass growth

The Secretary may enter into an agreement with the Secretary of Defense to—

- (1) conduct a study of reforestation and improved management of Department of Defense military installations and lands; and
- (2) develop a program to manage such forests and lands so as to maximize their potential for biomass growth and sequestering carbon dioxide

(Pub. L. 101–624, title XXIV,  $\S 2411$ , Nov. 28, 1990, 104 Stat. 4062.)

### § 6710. Authorization of appropriations

There are authorized to be appropriated such sums as may be necessary for each of the fiscal years 1991 through 1997, to carry out this chapter.

(Pub. L. 101–624, title XXIV, §2412, Nov. 28, 1990, 104 Stat. 4062; Pub. L. 104–127, title VIII, §843, Apr. 4, 1996, 110 Stat. 1170.)

#### AMENDMENTS

1996—Pub. L. 104-127 substituted "1997" for "1996".

## § 6711. Carbon cycle research

## (a) In general

To the extent funds are made available for this purpose, the Secretary shall provide a grant to the Consortium for Agricultural Soils Mitigation of Greenhouse Gases, acting through Kansas State University, to develop, analyze, and implement, through the land grant universities described in subsection (b) of this section, carbon cycle research at the national, regional, and local levels.

### (b) Land grant universities

The land grant universities referred to in subsection (a) of this section are the following:

- (1) Colorado State University.
- (2) Iowa State University.
- (3) Kansas State University.
- (4) Michigan State University.
- (5) Montana State University.
- (6) Purdue University.
- (7) Ohio State University.
- (8) Texas A&M University.
- (9) University of Nebraska.

# (c) Use

Land grant universities described in subsection (b) of this section shall use funds made available under this section—

(1) to conduct research to improve the scientific basis of using land management prac-

tices to increase soil carbon sequestration, including research on the use of new technologies to increase carbon cycle effectiveness, such as biotechnology and nantechnology;

- (2) to enter into partnerships to identify, develop, and evaluate agricultural best practices, including partnerships between—
  - (A) Federal, State, or private entities; and
  - (B) the Department of Agriculture;
- (3) to develop necessary computer models to predict and assess the carbon cycle;
- (4) to estimate and develop mechanisms to measure carbon levels made available as a result of—
- (A) voluntary Federal conservation programs;
  - (B) private and Federal forests; and
  - (C) other land uses;
- (5) to develop outreach programs, in coordination with Extension Services, to share information on carbon cycle and agricultural best practices that is useful to agricultural producers: and
- (6) to collaborate with the Great Plains Regional Earth Science Application Center to develop a space-based carbon cycle remote sensing technology program to—
  - (A) provide, on a near-continual basis, a real-time and comprehensive review of vegetation conditions;
  - (B) assess and model agricultural carbon sequestration; and
    - (C) develop commercial products.

### (d) Cooperative research

### (1) In general

Subject to the availability of appropriations, the Secretary, in cooperation with departments and agencies participating in the U.S. Global Change Research Program (which may use any of their statutory authorities) and with eligible entities, may carry out research to promote understanding of—

- (A) the flux of carbon in soils and plants (including trees); and
- (B) the exchange of other greenhouse gases from agriculture.

# (2) Eligible entities

Research under this subsection may be carried out through the competitive awarding of grants and cooperative agreements to colleges and universities (as defined in section 3103 of this title).

## (3) Cooperative research purposes

Research conducted under this subsection shall encourage collaboration among scientists with expertise in the areas of soil science, agronomy, agricultural economics, forestry, and other agricultural sciences to focus on—

- (A) developing data addressing carbon losses and gains in soils and plants (including trees) and the exchange of methane and nitrous oxide from agriculture;
- (B) understanding how agricultural and forestry practices affect the sequestration of carbon in soils and plants (including trees) and the exchange of other greenhouse gases,